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Threatened Cultural Resources

Editor's Note: Chief Historian Ed Bearss wrote on *this topic for the* CRM Bulletin *in June' 1988 (Vol. 11, No. 3). The following articles by Jerry Rogers, reprinted from the* NPS Courier*, and Larry Oaks, written to provide the state programs' point of view on these issues, constitute the second installment in our series on threats to our cultural and natural resources.*

The Challenge to the Future of the Past

Jerry L. Rogers

What do Manassas National Battlefield Park, Waterford National Historic Landmark District and Snee Farm have in common with Saguaro National Monument, Devil's Sink Hole National Natural Landmark, and Yellowstone National Park? Three things: (1) they are nationally significant cultural and natural resources officially recognized by the United States; (2) the National Park Service is entrusted with the duty to protect them, or at least to promote their preservation; and (3) they are threatened by forces far beyond the power of the National Park Service.*

Inadequately planned private development, o ten more accurately described as unplanned, poses potential harm to these and many other nationally significant resources. In most cases, acquisition of fee simple title to more land would not solve the problems but would only move the battlefront of conservation vs. development to a new sector. Federal preservation laws, far more effective on behalf of cultural resources than natural, were crafted in the 1960s to prevent harm by federal agencies rather than today's private sources of harm. The Constitution is widely, although by no means exclusively, interpreted as reserving power to regulate private property to the states, and the states traditionally delegate that power to local governments. "Like it or not," Director Mott said in July 1986, "the fate of nationally significant resources is in the hands of local governments."

Now to multiply the problem. What about the 48,000 entries in the National Register of Historic Places that are not nationally significant but are the warp and woof of our national heritage? What about the ponds, woodlands, hedgerows, and fields that provide habitat, unlisted on any register, that will be abandoned as human use crowds in? What about such a presumably commonplace thing as rural scenic beauty? Have you noticed that it is not so commonplace anymore?

When the first European settlers landed on these shores, their already ancient value system found perfect expression and with great, wasteful speed the wilderness was subdued. By the beginning of the twentieth century there was clear evidence that development did not always equate with improvement. The United States had set aside the first national parks and actually had begun efforts to repair earlier damage. Yet old habits

change slowly. Throughout the twentieth century we have simultaneously but inconsistently protected and laid waste to natural values. Especially in this century we destroyed so many historic places that many cities, towns, and rural neighborhoods saw their interesting individuality replaced by dull homogeneity. We are only now, in 1988, nearing the end of a very long period during which an absolute right to alter the landscape has been presumed, and immediate and personal gain automatically overcame long-range concerns and the interests of the general public.

This is a time both encouraging and dismaying. The old waste will soon end, but our capacity for destruction has become greater than ever before. Much more will be lost during the time when Americans are at last coming to grips with their destructive tendencies, but positive signs are clear. When the National Park Service courteously urged upon Loudoun County, VA, the duty to regulate suburban development threats to Waterford National Historic Landmark District, a few county supervisors reacted with the anti-government tirades that have been so effective for the past twenty years. Yet it was those individuals who were defeated soon afterward for re-election, rather than the supervisors who wanted to confront and deal with the problem.

When Director Mott urged Prince William County, VA, officials not to allow their own local zoning to be used with enormously harmful effect to Manassas National Battlefield Park, the county chairman responded that the Service should mind its business inside the park. She surely did not anticipate the subsequent outpouring of protest on a nationwide scale—but, most importantly, from her own constituents.

Similar examples can be cited from throughout the United States. With abundant exceptions it is becoming more politically popular to take care of natural, scenic, recreational, and historic resources. Yet if old habits of despoliation die hard, the fundamental American distrust of government will die even harder. Not far from Manassas and Waterford, and very close to Harpers Ferry National Historical Park, C&O Canal National Historical Park, and Antietam National Battlefield, we attempted last year to designate South Mountain Battlefield a National Historic Landmark. The rural Maryland landowners rose up and prevented designation, using a provision of law that allows a majority of private landowners to block designation through formal objections. Newspaper accounts poignantly portrayed landowners who had moved to South Mountain because of its rural character and who did not want the Park Service coming in and changing things! These individuals rejected their best means of defense even as suburbia marched up from Washington more resolute by far than McClellan in 1862. No doubt some owners harbored the secret desire to profit from development, but the publicly-expressed fear was that the Service would buy their land and move them out. No amount of correct information could overcome that fear.

What then do Americans want? Clearly Americans want to have their cake and eat it too. This means that our job is never going to be uncomplicated. I have asked people during the past few years what they expect of the Service. The answer I receive is expressed by a single word—leadership. They take for granted the leadership-by-example that the National Park Service provides inside the parks, but they want more. They are concerned about the problems we face inside the parks, worried about problems on the periphery of parks, and alarmed about problems in their own home towns. They see, as we do, that the problems of the parks and their home towns are related. They believe, as I do, that the Service must be active in helping the public to understand the issues and to arrive at solutions. They do not want passive bureaucracy. They expect the Service to advocate the full range of values and programs that have evolved from "the National Park idea."

We can begin by using those values and programs, not only for their enlarged purposes, but for the fundamental purpose of protecting the parks. Since 1966, the National Park Service has developed an extremely effective network of state historic preservation officers. These individuals operate statewide historic preservation planning systems that deal with history, architecture, archeology, engineering, and culture. These systems actively advocate the preservation of such resources; they cover every acre of

ground within the fifty states and nine other jurisdictions. They have more than 400 local governments supporting them from within and this number is growing rapidly.

Other elements of the "external" historic preservation movement, especially the National Trust for Historic Preservation's "Main Street" program, have developed a wide variety of ways to reconcile forces generally presumed to be opposites, for example: historic preservation and economic development. The historic preservation field has had uncanny success in confronting its critics, absorbing them, and converting them into preservationists.

In doing so it has learned lessons about development and mobilization of community support. Combined with our own knowledge of how to use the national park system units for the same purposes, we could do far more than we have done to show leadership and simultaneously to protect the parks against inadequately planned private development.

As we go about this, several problems will need to be overcome. Park superintendents and staffs, and certain regional and service center personnel will have to overcome the attitude that working with outside preservationists is a nuisance, especially in complying with Section 106 of the National Historic Preservation Act. Concurrently, state historic preservation officers and certain others will have to stop punishing those same individuals for things beyond their control, such as the administrative requirements of the federal/state program, or the budget proposals for grants-in-aid. They also will have to stop seeking out and flaunting National Park Service shortcomings for the purpose of underscoring some unrelated political position. More specifically, all of us must reconcile the differences between statewide historic preservation plans and park cultural resource management plans. These have been developed by different people for different purposes. We cannot afford the waste of throwing either away for the sake of the other, but they must be made mutually supportive.

Many parks are far along this course and are deeply involved in projects intended to encourage historic preservation beyond park boundaries and also to enlist preservation forces on behalf of park protection. Many others have yet to take the plunge. What is being done now will have to be described in another article. The same is true for Director Mott's call to improve overall coordination with state historic preservation officers, state outdoor recreation liaison officers and state park directors. Pacific Northwest Regional Director Charles Odegaard will be leading this initiative.

The task will be even more difficult in non-cultural resource areas. The outdoor recreation state liaison officers operate on a far less comprehensive scale than the state historic preservation officers. Some states have state natural heritage programs, but many do not. There is no federally-legislated network out there to deal with natural, scenic, or recreational values, and one is badly needed.

This article will inspire a few wistful moans about cutting back and dealing only with the nationally significant resources inside park boundaries, but it cannot be done. Neither natural nor cultural resources are respecters of boundaries. They tend to exist on both sides of the line, and some of them fly, swim, walk, or slither back and forth across it. Anyway, who wants a national park system surrounded and besieged by things opposite all it represents? Retreat and retrenchment are roads to decline, and this is not what the American people expect of us.

Jerry L. Rogers is Associate Director, Cultural Resources. *As this article goes to press, the threat to Snee Farm has been averted by adding the farm to the national park system as Charles Pinckney NHS.

This article was reprinted from the NPS Courier, *November 1988.*

Planning the Protection of Our National Heritage

F. Lawerence Oaks

Drive through almost any town in America and one cannot avoid seeing the tangible results of preservation's successes since the enactment of the 1966 National Historic Preservation Act. Our historic neighborhoods and downtown business districts are a living laboratory of what can be done with the cooperative effort of the Federal-state-local partnership between public officials and our Nation's strong private sector. Even with these successes, as thoughtful preservationists look beyond these individual accomplishments, they are extremely concerned about the failure of most American communities to effectively incorporate comprehensive historic preservation planning into public policy and decision-making. Coupled with the explosive growth of our urban centers and economic pressures for rural development, we find ourselves in a situation potentially as disastrous as when urban renewal and interstate highway construction of the 1960s brought about the National Historic Preservation Act.

The overwhelming question for our movement in the last decade of the 20th century is, "How can we increase planning for and protection of cultural resources at all levels of our society?" Recent attempts by the National Heritage Coalition to launch efforts in this area indicate that it is not a task for the short run, since it must involve a massive effort to convince the country of its necessity. If we are to protect our increasingly threatened national heritage, we must gear-up for a long battle. The ultimate test of success will not be the adoption alone of a national planning policy but whether or not we can entice local governments all over this Nation into incorporating planning processes into their daily consideration of cultural resources.

Why should the focus of any planning effort concentrate on the local government level? At its base level almost all historic preservation activity is local. It is here that we find the real trenches of historic preservation battles. While there is no question that the Nation has and must support an organized national historic preservation effort, the sum total of that heritage inevitably is comprised of local sites, buildings, and districts that represent some local government's history. While these sites need to be identified and evaluated within their state, regional, and national contexts, it is most likely that they will be preserved and interpreted through the efforts of local preservationists. It is essential that we create a climate across this country, even in the areas most hostile to planning and protection, which will encourage local governments to adopt new and innovative tools within the planning discipline.

How broad is the problem of inadequate or nonexistent planning? Fortunately, some states and regions have incorporated relatively sophisticated levels of cultural resource planning into their state and local efforts. Even in these areas preservationists are finding the need to plow new grounds in resource protection. In other parts of the country, possibly even the most of it, we find ourselves without effective planning and protection programs. Indeed, some states lack even the most rudimentary elements of cultural resource planning. To make things worse we find, particularly in the south and west, a strong indigenous distrust of the very concept of planning much less the use of stronger tools such as public taking and prohibition of demolition. Even with the 40-year history of successes created by the adoption of design review ordinances in our Nation's historic districts, design review is frequently just as hard to sell today in many of our local communities as it was in our earlier years. It is abundantly clear then that the greatest need in preservation today is the acceptance by the general public of cultural resource planning

and its associated tools. How do we go about moving the public to acceptance and support of these concepts?

We are called to take extraordinary steps if we are to preserve the Nation's heritage. Some might argue that planning will eventually happen and that with encouragement most communities will eventually see the logic and necessity of planning for their cultural resources. We can not simply wait for each local community and its government to decide that planning is essential. This would probably eventually happen, but only after the Waterford, Virginias and the Manassas Battlefields of the Nation are gone. If, in fact, we are not to wake up some day and realize that the historic fabric of this Nation has been destroyed, we must take action now.

It is paradoxical that the resources are largely local but the solution must be national—national in the sense that public and private preservationists at the local, state, and Federal levels must work together to create a climate which will mandate the acceptance of this agenda. The development of aggressive and effective leadership in this area by each member of the preservation partnership is essential if we are to convince the Nation and its communities to begin planning programs or expand on their current efforts. At the national level on the public sector side the National Park Service, its host agency—the Department of Interior, and the National Conference of State Historic Preservation Officers (NCSHPO) must examine ways to promote the common agenda. One thing is absolutely clear: success in this area is only possible to the degree that the Federal agency charged with the protection and management of cultural resources is universally recognized as a committed leader in word and deed for all the Nation's historic resources. Every level of leadership within the DOI and NPS—including the very highest—must acknowledge their major roles in and commitment to both "internal and external" programs. Preservationists expect and deserve the same level of concern for the 97% of this Nation's lands outside the National Park System as that which the park units receive. We will never convince "the man on the street" of the need for increased planning and protection without consistent and long-term acknowledgment by the national public sector leadership of its sacred charge to the resources of the **whole** Nation.

Likewise, the NCSHPO must offer leadership to its member states in new and creative ways in order to focus attention on this issue so as to create positive synergistic effects instead of random and disparate advances (and occasional retreats). The Conference and its partners must develop strategies which will advance the whole country in incremental steps toward the national goal. The Conference and its member states should increasingly use their pivotal location (as connector between the Federal and local governments) as a means of affecting greater and higher quality local participation in the national program. This can be accomplished by increasing efforts to integrate local commissions into state office programs and by strengthening interaction with and support of the National Alliance of Preservation Commissions.

The other side of the equation of historic preservation in America that cannot be overlooked is the private sector and its representatives' responsibilities toward fostering the adoption and improvement of planning activities. The National Trust for Historic Preservation, Preservation Action and the statewide non-profits and their national organization have

major roles to play in planning for and adoption of a long-range strategy for making the quantum leap we want to see in this area. In the final analysis the public sector alone cannot accomplish these goals, the very thought process of our Nation must be changed—this can only be done at the local level through grass roots efforts. The logical forum in which this effort should have its genesis is the newly formed National Historic Preservation Coordinating Council. That group should call a special meeting with the expanded participation of groups like the American Planning Association and the League of Municipalities at which the entire preservation community would begin to map out a comprehensive long-range plan for the creation of an environment conducive to cultural

resource planning and protection in the United States. Each partner should, in turn, adopt a five-year plan for its organization to contribute to this national effort.

What are some of the things that the National Park Service could do in such an effort or while it is gearing up? The first has been mentioned already—exert a strong leadership for cultural resources at all levels: at the Department of the Interior, throughout the Park Service Directorate, among all park superintendents and ultimately among individual employees. Secondly, the NPS and the NCSHPO should develop a far different and much better relationship between the SHPO and the park superintendents, particularly in the area of planning since both have such a strong involvement in this important process. The theme of planning and protection beyond the parks' borders has been a topic of discussion within the Service for several years. Each of the units of the Park System exists within a state and local context. For these units to be protected and interpreted effectively this effort must be coordinated with related natural and cultural resources that may not be within the park boundary. This demands a close and friendly association between park managers and SHPOs and their natural resource counterparts. The Service is experimenting with these approaches in several parks and regions, and in specific projects such as "America's Industrial Heritage Project." On a broader scale, the "Partnership" initiated by former Director Mott has been useful. Let us hope that Director James Ridenour who, like Bill Mott, has served as a State Historic Preservation Officer, will expand it and make it even more useful as a tool of communication and cooperation.

At no time in our history have we had a more compelling issue before us. The very existence of a significant portion of our rich national, state, and local heritage is being threatened. We are fortunate in that pollsters tell us the majority of American citizens are increasingly concerned with the rapid loss of essential elements of our natural and cultural environment. We as a community must act now in an organized and concerted way to plan for our future. The alternative is the ever increasing erosion of the daily tangible reminders of who we are as a people—our cultural resources.

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The Association For Preservation Technology International

Susan Ford Johnson

The Association for Preservation Technology was initiated in 1968 by Mr. Oliver Torrey Fuller, a curator of furnishings. A group of individuals representing museum administration and object curation, historic furnishings, documentary film making, cultural resource management, grants management, and historic architecture as well as private and governmental restoration specialists assembled in Quebec that year. They agreed that an organization was badly needed for professionals in preservation and conservation where there would exist a forum m which to share preservation knowledge and experience. Formed as a joint Canadian/United States organization, APT continues to serve the preservation community in both North American countries and abroad.

The original objective of the organization was to improve education and communication, emphasizing research and excellence in such fields as museum conservation, preservation technology, historic landscapes, and architectural artisanry. This objective has been addressed primarily through annual conferences, training courses and educational publications. In addition, APT has a number of chapters in North America and abroad which hold special seminars on relative regional topics. A professional reference service is also available to members.

Today, APT's membership extends to professional architects and engineers, researchers, preservation and museum administrators, conservators, hands-on practitioners, craftsmen, technicians and manufacturers of products for the multi-million dollar industry. The organization's mission is the care and wise use of the built environment by providing the best technical information to those who would benefit from its application.

Publications

Since 1970, APT has published at the leading edge of preservation technology with the *APT Bulletin, The Journal of Preservation Technology.* The *Bulletin* performs an important function by providing members with the latest information in preservation technology. A bimonthly newsletter, *Communiqué* provides news to and of members as well as technical preservation news about meetings, activities of APT, other organizations and recent publications. The *APT Bulletin* and technical publications have not only been important sources of technical information, but they have provided effective direction in shaping preservation philosophy and practice.

Training

Pre-conference training sessions, begun in 1971, have now become a standard part of the Annual Conference. An example of the importance of the in-depth training sessions was the workshop on Maritime Preservation held in 1985. Presentations made by conference participants led to a set of standards, developed as a document for maritime preservation in the future. This document has been used by the National Park Service to help develop procedures to evaluate the significance of all preserved ships in the United States. The draft from the APT pre-conference meeting serves as an interim standard of practice. The proceedings were edited and published as a special *APT Bulletin* issue on Maritime Preservation in 1987.

In addition, APT has designed a training program in preservation technology which is divided into two components—a series of four courses dealing with general topics in preservation technology, and five courses considering specific building materials. The program is designed primarily for the mid-career practitioner. APT is presently analyzing

various markets for providing this service in addition to the pre-conference training sessions.

The 1989 Annual Conference will be held in Chicago, September 4-9. The theme for the conference is

"Make No Little Plans" taken from the philosophical statement by the great Daniel Burnham. Technical creativity in the planning and implementation of preservation is at the head of the conference. The two pre-conference training courses, September 4-6, are designed around high-rise buildings. Course I is *High-rise: Investigation and Analysis* and Course II is *Historic Concrete: Investigation and Repair.* Printed information and brochures will soon be available.

Awards

Support for excellence in preservation practice comes from publications, from conferences, and from special technical publications. It also comes from recognition of those who have contributed significantly to the field. Two awards are given at the Annual General Meeting of the membership which is held during the Annual Conference. The Oliver Torrey Fuller Award is given to the author of the best article to appear in the *APT Bulletin* over the past year and the Harley J. McKee Award for outstanding contributions to the field of preservation technology.

In the summer of 1988, the organization moved from its home of 20 years in Ottawa, Canada to the United States where it is now headquartered in Fredericksburg, Virginia. At the Annual Meeting in Boston of that year the worldwide scope of APT's diverse membership was addressed by adding the word "International" to its name. In keeping with the theme of the Chicago conference, the organization is spending the better part of 1989 in the planning process preparing for its next 20 years.

Membership

APT International is a not- for- profit corporation with membership dues providing the basic financial support; additional funds are raised through training courses, conferences and book sales. APT International receives no government support other than that which might be appropriated through grant support for special project assistance.

Membership in APT is diverse, drawing upon a broad range of talents and expertise. Membership is on an anniversary date basis. All members receive the *APT Bulletin* and *Communiqué',* special membership rates for the Annual Conference and invitations to other special APT events. For more information, contact APT, P.0. Box 8178, Fredericksburg, VA 22404; Phone: 1-703/373-1621 or 1622.

CRM Planning: A Review

Ronald W. Johnson

A bout a year ago, the *CRM Bulletin* began a series of CRM planning articles. Since then, L3 articles have been published. The articles approached the topic of planning from several perspectives: internal park planning, external planning programs, state-of-the-art technical applications, and state activities. Thus, readers have been treated to a potpourri of ideas, experiences, and technical advances by CRM professionals in NPS central offices and the field, as well as state preservation offices.

Recapping the Series

Several individuals discussed in-house CRM planning activities. Sharon A. Brown and John Paige (April 1988) described how Denver Service Center (DSC) historians serve as planners and compliance specialists, as well as consultants to design and construction personnel. Randall D. Cooley (April 1988) explained that the success of America's Industrial Heritage Project will be proportional to the ability to consolidate various elements of CRM planning for the accomplishment of locally-initiated NPS assisted projects. Cathy Gilbert (June 1988) gave an account of how CRM specialists identified significant historic landscape components and developed an appropriate design and management plan to enhance visitor understanding and use of the Fort Spokane site at Grand Coulee NRA. Stephanie S. Toothman (June 1988) related how the combined efforts of field and regional staffs and CRM professionals throughout the Service have led to significant progress in improving the identification, evaluation, and protection of cultural resources in natural areas such as the North Cascades National Park Service Complex. Kathleen Lidfors (June 1988) told how park-generated CRM implementation plans have met critical resource needs of the Apostle Islands National Lakeshore and should continue to provide direction and information for several years.

Pertaining to external preservation planning, Sandra S. Weber (April 1988) described the Systemwide Cultural Resources Summary and Action Program (RSAP), and analyzed the role of regional and system-wide RSAP reports in the development of improved cultural resources management strategies. Kirk Cordell (October-December 1988) examined a coordinated cultural resources planning effort between Mammoth Cave National Park, the Southeast Region, and the Kentucky State Historic Preservation Office.

On a more technical level, Alicia Weber (June 1988) discussed the List of Classified Structures (LCS) and the Cultural Resources Management Bibliography (CRBIB) and how these systems have progressed as important management tools and as valuable research tools accessible to professionals, scholars, and the general public. Sharman Roberts (June 1988) reported that the Chadwyck-Healey project provided an opportunity for important documents listed on the CRBIB to be preserved in a usable and archivally stable form. John J. Knoerl and Sandy Weber (August 1988) discussed the advantages of Geographic Information Systems (GIS) for cultural resources planning and identified current applications.

From the state perspective, Jeff Dean and Barbara Wyatt (April 1988) related how Wisconsin's cultural resources management plan for historic properties provides the state's historic preservation community with a framework for planning for the identification and guidelines for evaluating cultural properties. Wyoming SHPO David Kathka (June 1988) demonstrated how a number of private and public entities worked together to plan for the eventual restoration and development of the Wyoming Territorial Prison in Laramie as a state historical park/recreation area.

In the last issue (No. 2, 1989), Carey Feierabend described the Boxley Valley Land Use Plan/Cultural Landscape Report at Buffalo National River, prepared by the Denver

Service Center in 1985. She discussed visual compatibility guidelines intended for park managers, the local community and visitors to make new construction compatible with the cultural landscape.

GMP for Friendship Hill NHS

As part of this ongoing series of articles, we offer the following account of how effective cooperative planning between various NPS offices, the Pennsylvania SHPO, and the public resulted in the expeditious completion of a general management plan (GMP) for Friendship Hill National Historic Site.

The 1978 National Parks and Recreation Act authorized establishment of Friendship Hill NHS to commemorate Albert Gallatin, a prominent Jeffersonian-era public official who served as Secretary of the Treasury (1801-18~3). The Gallatin unit contains 661 acres, about 70 miles south of Pittsburgh. The site encompasses the main house (originally built in 1789), a wood frame barn, small cemetery, roads and trails, landscaped grounds, open fields and woodlots. The entire site is a National Historic Landmark.

The DSC was given the task of preparing a GMP as well as a historic resource study (HRS). Initially the HRS team, managed by a research historian and assisted by an archeologist and historical architect, collected data. Meanwhile, a GMP team comprised of a cultural resources specialist (team captain), outdoor recreation planner, and a landscape architect assisted by park and regional personnel began the planning effort. This team prepared a draft general management plan which contained a resource analysis, five alternative strategies for future preservation, interpretation, development and visitor use and an environmental analysis. As the planners visited the park, met with various publics interested in Friendship Hill and collected data, constant interaction occurred between the two DSC teams.

As the three cultural resources specialists prepared their assignments for the HRS, certain materials were tailored for immediate insertion in the GMP. Attention then shifted to alternatives formulation. Joint meetings produced several innovative and useful concepts incorporated in five management alternatives presented to the Mid-Atlantic Regional Director. The alternatives focused on "continuation of the existing situation," a "large-scale historical/recreational park," and a purely "historical period park."

According to the approved plan (which featured a historical/recreational park), Friendship Hill is finally seeing the restoration of the main house, preservation of some non-Gallatin period cultural resources, and removal of nonsignificant or dilapidated structures. No one-way loop roads, intrusive visitor center or intensive development mar the historic scene.

Most importantly, the planners and CRM personnel learned some valuable lessons:

Ground Rules. The team prepared solid estimates regarding schedules, costs and personnel using the DSC's workload analysis system. Realistic task directives containing well-defined scopes of work, schedules, and cost estimates were prepared for the two projects. Before the project started, the planning team captain went to the park and region and contacted the Pennsylvania SHPO staff as well as the Advisory Council staff in Denver. He explained planning strategy, identified milestones and requested assistance and cooperation to meet a tight deadline.

Proximity of Key Personnel. The HRS and GMP teams worked at the DSC. When issues or questions arose, it was an easy matter to resolve them. A team leader must keep personnel informed with frequent briefings, updates, and courtesy calls.

Management Support. All parties realized the urgency of completing this assignment quickly to meet the Congressional mandate. Management at DSC, and park and region gave their support involving funding, personnel requests and the critical area of review. This includes support staff and reviewers. The team captain went to the regional office at important milestones to review comments firsthand, then to decide which were to

be incorporated and get management's approval to proceed. The roundtable sessions and briefings for the regional director got the document back to the planning team quickly.

Thus, various professional disciplines worked together and a useful product emerged. With the data generated by the professionals who prepared the HRS and the GMP as well as subsequent cultural resources projects at the park, Friendship Hill National Historic

Site has been open to the public since early 1982. It attracts approximately 12,000 visitors yearly, and major restoration of the main house has been programmed.

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Preservation Technology Update
Asbestos and Historic Buildings

Introduction Since asbestos in a loose (friable) condition is known to cause a fatal lung disease if inhaled or swallowed, airborne asbestos contamination in older buildings is a serious concern. Surveys conducted by the Environmental Protection Agency (EPA) estimate that asbestos-containing materials can be found in approximately 31,000 schools and 733,000 other public and commercial buildings in the United States. Those statistics are not to be interpreted to mean that there is an active hazard in each building, but rather, indicate a potential hazard if the asbestos fibers become airborne through abrasion or decomposition. Asbestos in buildings is generally found in three general categories of materials:

- a component of sprayed-on or troweled-on ceiling and wall surfacing materials;
- thermal or fireproof insulation of pipes and boilers;
- a variety of composition products including floor and ceiling tiles, roof and wall shingles.

The EPA is the acknowledged leader in preparing guidance on limiting exposure to asbestos. The 1985 **Guidance for Controlling Asbestos-Containing Materials in Buildings** ("the purple book") is an excellent source of information; a copy should be obtained by all individuals responsible for building maintenance and by administrators undertaking asbestos surveys. Copies may be obtained from EPA at the address listed under Organizations and Research Sources elsewhere in this Update.

Each Federal agency has its own procedural directives on identifying and controlling asbestos in buildings. For the National Park Service, a Special Directive (2l5l89) from the Director of the National Park Service requires that an **Asbestos Survey** be conducted for newly purchased building or those scheduled for rehabilitation within the national parks. This NPS document was in response to EPA's directive. In order to protect employees and the public, it is critical that the location and condition of asbestos in existing buildings be determined, and a management plan for dealing with this material be developed. For those persons responsible for asbestos surveys within the National Parks, the NPS Asbestos Management Control Program (FTS 343-7017) should be consulted for requirements of the surveys and asbestos management plans.

Airborne asbestos contamination in older and historic buildings may pose a significant health hazard that cannot be dismissed. The presence of asbestos in buildings, however, does not automatically endanger the occupants of the building. If the materials are in good condition or protected with coatings to prevent the release of asbestos fibers into the air, there may be little or no danger to building occupants. There is cause for serious concern, however, when these materials are disturbed, when they are poorly maintained, or when there are undetected leaks. It is for this reason that all property owners should know what asbestos-containing materials ("ACMs") are in their buildings, what condition the asbestos is in, and what effect renovation and or maintenance will have on the release of these microscopic fibers.

In the case of **Historic Buildings,** proper planning will be required prior to surveying for asbestos-containing materials because of the potential damage caused to surfaces as a result of taking samples for evaluation. This Update outlines the legislative mandates regarding asbestos identification and abatement, the history of asbestos and its use in buildings, the need to undertake an architectural survey as well as an asbestos survey in order to protect the historic resource, and options for eliminating or reducing the health hazards through an asbestos abatement plan.

Legislation

Currently Federal laws addressing asbestos in buildings: (1) require that schools (K-12 grade) identify asbestos-containing materials and prepare management plans; (2) specify work practices for the removal of asbestos-containing materials from buildings; and (3) restrict the use of most asbestos products in new buildings.

There are no standards for asbestos exposure in non-industrial settings, nor are there currently regulations requiring corrective action in buildings *other* than schools. There has been, however, discussion by several congressional subcommittees (including Commerce Subcommittee of the House Energy and Commerce Committee) to extend to Federal buildings some of the provisions which require schools to identify asbestos. The requirement to undertake an **asbestos survey** of recently purchased or soon-to-be-renovated buildings within the national park system is in keeping with this public concern.

EPA has had the lead role in establishing regulations for the identification, control, and removal of ACMs. As early as 1972, asbestos-producing industries were affected by the Clean Air Act; spray-on ACMs were banned in new construction; and procedures for handling asbestos in the process of demolishing structures were outlined. With revisions to these regulations in 1975 and 1978, almost all types of asbestos in buildings were banned. In addition, owners of buildings to be demolished were required to implement an asbestos management program if the buildings contained more than a certain amount of asbestos. These EPA regulations are known as the National Emissions Standards for Hazardous Air Pollutants **(NESHAPS)** and should be reviewed before any asbestos is removed from a building.

A more recent law—and one that may have a significant impact on Federal buildings in the near future—is the Asbestos Hazard Emergency Response Act **(AHERA)** issued by Congress in October of 1986. This legislation directly affects public and private schools which were required to identify friable and non-friable ACMs and to submit management plans if asbestos were found.

Asbestos removal is governed in part by the regulations of the Occupational Safety and Health Administration (OSHA-29 CFR 1926.58). The standards set out in the regulations are intended to protect the public health and the health of the worker removing ACMs. For example, there are requirements for enclosure of the area during asbestos removal, use of air filters and respirators, proper disposal, and extensive record keeping and air monitoring throughout the project.

In addition to Federal regulations regarding the identification, control and removal of asbestos, many states have their own regulations, some more stringent than OSHA or EPA requirements. For example, Florida requires the inspection of all state-owned buildings; New York State requires asbestos inspections for buildings converting to condominiums or cooperative use; and California requires building owners to make a good faith effort to survey their private buildings for asbestos before renovation. Copies of Federal regulations may be obtained by calling or writing OSHA and EPA at the numbers listed in the Organizations and Research Sources section found elsewhere in this Update.

In discussing the laws and regulations that affect asbestos removal, it is important to keep in mind the provisions of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470). This legislation established the legal and administrative context for historic preservation by Federal agencies, including identifying historic properties under their jurisdiction and considering the impact of proposed actions on their historic character. For this reason, any *historic* buildings included as part of the **asbestos survey** should specify asbestos containment or removal techniques that minimize damage to significant historic fabric.

History of Asbestos

The word "asbestos" is from a Greek adjective meaning "inextinguishable." It is mined as a dense rock, but can be easily pulled apart into fibers. Its fireproof properties were known by the ancients, who used asbestos as lamp wicks for "perpetual" flames in temples and for cremation shrouds. Examples of asbestos fabric can be found in ancient

Chinese, Egyptian, Syrian, and Roman cultures. The art of weaving asbestos fiber apparently was lost in the Middle Ages. The material was rediscovered in the mid-19th century because, as an incombustible material, it had many uses as insulation for high temperature equipment.

In the late 19th century, asbestos was used to insulate boilers, steam pipes, turbines, and oven kilns; as a fireproof fabric for theater curtains; and as a new type of roofing material composed of pressed layers of burlap, jute, asbestos, and pitch. The greatest number of building products using asbestos were developed after World War I and continued in production until the 1970s. Most were used for exterior siding, roofing shingles (some cementitious), building papers, pipe insulation, electrical wire insulation, fire-rated panels, spackling compounds, some plasters, stuccos, textured wall paints, and cement sewer pipes. See Chart 1 for a list of asbestos-containing building materials.

The Environmental Protection Agency has identified asbestos-containing materials as those that contain, at a minimum, 1% asbestos. Lesser amounts are difficult to detect by laboratory analysis. As revealed on the chart of asbestos-containing materials, most contain significant amounts of asbestos, particularly the products used for fire protection.

Health Concerns

Because of the extreme fineness of asbestos fibers, they can become airborne by abrading ACMs or as a result of the decomposition of building materials from age, water damage, or deferred maintenance. Once in the air, they can stay suspended for a long time, can settle to the ground, or be reintroduced into the air by vacuuming, sweeping or other disturbances. The tiny fibers cannot be detected with standard analytical methods; special microscopy and photo-sensitive equipment is necessary to effectively detect their presence in air. To illustrate how molecularly fine asbestos fibers can become, in examining a square inch of surface there could be 630 human hairs; or 2,500 cotton fibers; or as many as 1,400,000 fiber particles of asbestos.

EPA's study to determine the levels of airborne asbestos in buildings and other settings contains some interesting statistics. Prior to 1972, when ACMs were still in production, the level of asbestos in the asbestos industry workplace was typically 10,000 to 10Q000 greater than in other indoor situations (i.e., schools). Levels of airborne asbestos in 1972 were determined by phase contrast microscopy; in the 1980s, levels in school buildings were measured using transmission electron microscopy. These two systems are not directly comparable but the radical degree of difference in the two levels did indicate the seriousness of the industry workplace. While the airborne asbestos level in schools is dramatically lower than industrial sites, it is still 10 to 100 times greater than outdoors. For these reasons it is critical to identify asbestos in buildings and insure that fibers do not become airborne.

Most people diagnosed with asbestos-related diseases were exposed to high levels of asbestos in the industrial workplace. Only a small proportion of people exposed to low levels of asbestos will develop asbestos-related diseases. Nonetheless, as a precaution, workers undertaking the asbestos survey and subsequent repair or removal should be properly protected with approved asbestos filtering respirators and special garments, and proper procedures established by both OSHA and EPA must be followed.

The Architectural Survey

Identifying the presence of asbestos in older buildings requires the removal of bulk samples of historic materials. This work can be extremely damaging to historic buildings because samples deep enough to include substrate materials must be taken from numerous locations for evaluation in the laboratory. As part of the planning process, a preservation consultant or a specialist in historic building materials should be retained as part of the team responsible for the asbestos survey and the development of a management plan or asbestos abatement plan. The preservation consultant can undertake an architectural survey which should at a minimum identify the age of the building, the materials present, and their

importance as part of the architectural character and history of the building. Because the removal of samples and the subsequent repair of these disturbed areas will have an impact on the historic building, it is recommended that **no historic materials be removed from the historic building until an architectural survey has been completed.**

The most significant finishes and features should be identified and prioritized so that original craftsmanship, ornamental or decorative elements or alterations that have gained significance over time can be protected from disfigurement. This architectural survey will help in selecting locations where samples may be taken with minimum impact to the historic resource.

Part of the architectural survey should include the dating of the building and any alterations to the building over time. Since asbestos generally was not introduced into building materials until after World War I, unaltered historic buildings should be asbestos-free. Others might be limited to pipe wrapping in the basement. Every consideration should be made to avoid damage to historic materials if there is adequate documentation proving that asbestos is not present. Where it is known that asbestos is present (such as vinyl asbestos floor tile), it may be unnecessary to take samples of the materials. These materials can be listed for action in the abatement plan.

The Asbestos Survey

Because asbestos cannot always be identified by sight, the preservation consultant cannot be expected to identify it as part of the architectural survey. Therefore, an asbestos consultant should be part of the assessment team and, if possible, be familiar with the special nature of a historic building. Licensed asbestos removal contractors may not be sensitive to the requirements of preserving historic materials without specific instructions from the building owner. If a comprehensive plan has been developed that identifies significant finishes and features that must be preserved prior to the hiring of the asbestos abatement contractor, there will be less chance of irreparable damage.

Samples of approximately 3l4" x 3l4" of material, including the substrate, are removed from surfaces of the building, put in special bags, labeled, and sent to the laboratory for analysis. As previously mentioned, samples should be taken from less visible locations where they will not damage ornamental surfaces, and if necessary, decorative moldings or paneling should be removed by a professional carpenter prior to the inspection of framing or hidden materials. The repairs should be made immediately, or temporary patches installed, to avoid friable material entering the air. If repairs to historic materials are made, they should match the material, color, texture and other visual qualities of the adjacent materials.

At a minimum, the asbestos survey should identify:

- Location of samples taken: plans, elevations, photographs;
- Condition of material taken: friable, non-friable;
- Laboratory results of material: asbestos-containing or non-asbestos;
- Risk assessment of future damage if ACMs left in place: are they in a heavy traffic area? are there vibrations from adjacent movable surfaces? how accessible are the ACMs to the air?
- Abatement proposal for each area of asbestos-containing material
- Future maintenance/monitoring requirements for asbestos remaining in building.

Abatement Plan

The term "abatement" refers to removing or minimizing the health hazards of asbestos within buildings, either by the total removal of the asbestos or by some means of encapsulation or enclosure to assure that the fibers do not become airborne. While the early recommendations by various agencies were to remove all ACMs from buildings, it is now believed by EPA and others that if the material is in good condition, or can be repaired and put into a stable condition, it can be effectively controlled and left in place. This is an

important option for historic buildings; it allows consideration of special operations and management of the materials without their removal.

The resulting abatement proposals will call for one of the following actions listed on Chart 2: **removal, encapsulation, enclosure, or special operations and maintenance program.** The type of abatement procedure selected will be determined, in many instances, by the importance of the architectural materials and features affected. Ornamental features should be protected without removal. Nonsignificant materials (pipe wrapping, insulation) can generally be removed if care is taken to protect surrounding materials. For architectural features, such as asbestos/concrete roofing shingles or asbestos siding in good condition, it may be possible to set up a monitoring system to determine when the shingles are likely to break down and will need to be replaced with a non-asbestos product or given a protective coating.

For decorative elements, such as early examples of vinyl asbestos floor tile, it may be possible to encase them in clear resins or other sealers to ensure that asbestos fibers are not released into the air. These abatement procedures can then be monitored.

If it is known that there are some ACMs located in the building, and the ACMs are not friable (loose, granular, fluffy), it may be possible to leave these surfaces as is and undertake a **special operations and maintenance program.** For example, if asbestos-containing spackle had been used to repair plaster walls and the surface is intact with subsequent layers of paint, it may be unnecessary to disturb the subsurface where the ACM is located. It should be identified as an area where asbestos-containing materials are present to avoid sanding the surface or otherwise disturbing the material. Routine maintenance and periodic inspection can assure that the area stays in good repair. Maintenance workers should be properly trained to look for examples of damaged ACMs (frayed or cracked pipe insulation, chipped stucco or peeling textured paint surfaces, etc.), and report them to the building supervisor for immediate abatement.

Because the whole issue of asbestos removal or abatement is relatively new, it is still unclear as to the best course of action in each situation. It may be that removal and proper disposal is the long-term objective, but permanent encapsulation may be perfectly appropriate and, may in fact, put less asbestos into the air than removal. New monitoring and removal devices will undoubtedly be developed in the near future as the understanding of the material and technology improve. Until then, any materials left in the building as part of the special operations and maintenance plan must be properly monitored, maintained, and protected from deterioration due to vibrations, leaks, neglect, accidental impact, and future remodeling.

Summary

With careful planning, both preserving historic buildings and making them safe can be achieved. A professional team of trained and licensed consultants knowledgeable about historic materials and asbestos-containing materials should be hired to undertake both an **architectural survey** and an **asbestos survey.** An **abatement plan** should be developed that provides a safe environment and preserves the historic building.

Following is a list of Organizations and Research Sources, EPA's Regional Asbestos Coordinators, and books and articles to assist with identifying and controlling asbestos in buildings. Because the need to evaluate the presence of asbestos is spawning new businesses and taxing existing laboratories, there will be a few years of transition until the industry is well established. For that reason, it is important that the people who undertake the work be properly certified, experienced, professional, and capable. Additional research is also needed to ensure that high standards for protecting the public are maintained while at the same time preserving our architectural heritage.

The information contained in this Update is based on current guidance from EPA and the National Park Service. Federal regulations regarding asbestos in buildings and its

removal are limited; local requirements may be more stringent. As more regulations take effect, as better techniques are developed to survey asbestos, and as abatement treatments other than total removal gain more acceptance, the body of guidance will necessarily change.

CHART 1 ASBESTOS-CONTAINING MATERIALS FOUND IN BUILDINGS*

Subdivision	Generic name	Asbestos (%)	Dates of use	Binder sizing
Surfacing material	sprayed- or troweled-on	1-95	1935-1970	sodium silica portland cem organic bind
Preformed thermal insulating products	batts, blocks, and pipe covering			
	85% magnesia	15	1926-1949	magnesium c
	calcium silicate	6-8	1949-1971	calcium silica
Textiles	cloth			
	blankets (fire)a	100	1910-present	none
	felts	90-95	1920-present	cotton/wool
	blue stripe	80	1920-present	cotton
	red stripe	90	1920-present	cotton
	Green stripe	95	1920-present	cotton
	sheets	50-95	1920-present	cotton/wool
	cord/rope/yarns	80-100	1920-present	cotton/wool
	tubing	80-85	1920-present	cotton/wool
	tape strip	90	1920-present	cotton/wool
	curtains			
	(theatre, welding)	60-65	1945-present	cotton
Cementitious concrete-like products	extrusion panels	8	1965-1977	portland cem
		corrugated	20-45	1930-presen
	flat	40-50	1930-present	portland cem
	flexible	30-50	1930-present	portland cem
	flexible perforated	30-50	1930-present	portland cem
	laminated (outer surface)	35-50	1930-present	portland cem
	roof tiles	20-30	1930-present	portland cem
	clapboard and shingles			
	clapboard	12-15	1944-1945	portland cem
	siding shingles	12-14	unknown-present	portland cement
	roofing shingles	20-32	unknown-present	portland cement
	pipe	20-15	1935-present	portland cem
Paper products	corrugated			
	high temperature	90	1935-present	sodium silica
	moderate temperature	35-70	1910-present	starch
	indented	98	1935-present	cotton and o
	millboard	80-85	1925-present	starch, lime,

Roofing felts	smooth surface		10-15	1910-present	asphalt
	mineral surface		10-15	1910-present	asphalt
	shingles		1	1971-1974	asphalt
	pipeline		10	1920-present	asphalt
Asbestos-containing compounds	caulking putties		30	1930-present	linseed oil
	adhesive (cold applied)		5-25	1945-present	asphalt
	joint compound			1945-1975	asphalt
	roofing asphalt		5	unknown-present	asphalt
	mastics		5-25	1920 present	asphalt
	asphalt tile cement		13-25	1959-present	asphalt
	roof putty		10-25	unknown-present	asphalt
	plaster/stucco		2-10	unknown-present	portland cement
	spackles		3-5	1930-1975	starch, casei
	sealants fire/water		50-55	1935-present	caster oil or
	cement, insulation		20-100	1900-1973	clay
	cement, finishing		55	1920-1973	clay
	cement, magnesia		15	1926-1950	magnesium c
Asbestos ebony products			50	1930-present	portland cement
Flooring tile and poly(vinyl)chloride	vinyl/asbestos tile		21	1950-present	
	Sheet Goods	asphalt/asbestos tile		26-33	1920-present a
		sheet goods/resilient		30	1950-present d
	Wallcovering	vinyl wallpaper		6-8	unknown-preser
	Paints and coating	roof coating	4-7	1900-present	asphalt
		air tight	15	1940-present	asphalt

*This chart is from EPA's *Guidance for Controlling Asbestos-Containing Materials in Buildings*, 1985. The information contained in the chart is taken, with modification, from: Lory EE, Coin DC. February 1981. Management Procedure for Assessment of Friable Asbestos Insulating Material. Port Hueneme, CA: Civil Engineering Laboratory Naval Construction Battalion Center. The U.S. Navy prohibits the use of asbestos-containing materials when acceptable nonasbestos substitutes have been identified.

a Laboratory aprons, gloves, cord, rope, fire blankets, and curtains may be common in schools.

CHART 2
COMPARISON OF ASBESTOS ABATEMENT ALTERNATIVES IN HISTORIC BUILDINGS

METHOD	ADVANTAGES	DISADVANTAGES	APPROPRIATE APPLICATIONS	INAPPRO APPLICA
REMOVAL Asbestos-containing materials are totally removed from the building Example: asbestos insulation removed from basement pipes	Eliminates asbestos source Eliminates need for destroyed or special operations and maintenance program	May destroy significant historic P Replacement with substitute material may be necessary Porous sub-surfaces encapsulation Improper removal may raise fiber levels	Appropriate for insulation, pipe fabric non-historic may require	Inappropri significant wrappings disfigured
ENCLOSURE Asbestos-containing materials are enclosed in airtight new construction Example: Asbestos-wrapped exposed pipes enclosed in a new chase	Reduces exposure in ACM Inappropriate if new area outside enclosure detracts Initial costs may be lower than for feature removal unless relocating Usually does not require replacement of material	May obscure historic Containment barriers fabric needed enclosure Asbestos source remains - may need to be removed vacuum attachments eventually utilities need Fiber release continues behind enclosure Special operations program required to control access to enclosure for maintenance and renovation	Appropriate if is located in a small if disturbance or entry into area unlikely	area (appea archi deteri mater rapid if wa evide if dar into e likely
Periodic reinspection required to check for damage Repair of damaged enclosure necessary				

		Fibers released in dry form during construction of enclosure Long-term costs could be higher than for removal		
ENCAPSULATION Surfaces of asbestos-containing materials are laminated or covered over with new materials or retains painted coatings Examples: Wall surfaces of asbestos-containing paints repainted Non-descript vinyl-asbestos floor tiles covered over with new sheet vinyl tile	Appropriate for fiber release from material does not significant Initial costs may be lower than for removal would Does not require replacement of material cause not likely and special evident Clear coating allows visibility of historic material and may restore to old surface (originally painted) the historic appearance	**Reduces** asbestos Inappropriate if of historic finishes needed material remains and may need to be removed later Airless sprayers If material is not in good condition, Previously material if water damage is material to materials may have to delaminate Periodic reinspection required to check for New painted surfaces deterioration Repair of damaged or deteriorating encapsulated surface required Encapsulated surface is difficult to remove and may require dry techniques for eventual removal Long-term costs may be higher than removal	May alter Containment historically Asbestos source place if material still bonding integrity if damage to sealant may encapsulated maintenance be acceptable if material is granular or damage or provides a good surface for new coating	mate shoul if ma dama is lik If ma fluffy ceme
SPECIAL OPERATIONS	Leaves original ACM Inappropriate if materials in place significant materials not in good	Asbestos source remains Special building cleaning practices are	Appropriate if is part of a	

(MONITORING AND MAINTENANCE			feature or essential	
Asbestos-containing materials are left in place if there is no evidence of fibers becoming airborne. Special maintenance, monitoring and periodic inspection will be necessary.	condition and has Lowest initial cost of high potential for any alternative	Periodic reinspection required to assess material condition and potential for erosion or disturbance Periodic inspections	treatment that remain visible if material is m condition and low potential for erosion or disturbance if material is non-friable	erosi distu
Example: Asbestos concrete shingles on building monitored for evidence of deterioration				

*This chart was adapted from Appendix A in EPA's *Guidance for Controlling Asbestos-Containing Materials in Buildings (1985).*

Environmental Protection Agency
Regional Asbestos Coordinators

For information on asbestos identification, health effects, abatement options, analytic techniques, asbestos in schools and contract documents:

Region 1
Regional Asbestos Coordinator
USEPA
JFK Federal Building
Boston, MA 02203
(617) 223-0585

Region 2

Regional Asbestos Coordinator
USEPA
Woodbridge Avenue
Edison, NJ 08837
(201) 321-6668

Region 3
Regional Asbestos Coordinator
USEPA
841 Chestnut Street
Philadelphia, PA 19107

Region 4
Regional Asbestos Coordinator
USEPA
345 Courtland Street N.E.
Atlanta, GA 30365
(404) 881-3864

Region 5
Regional Asbestos Coordinator
USEPA
230 S. Dearborn Street

Chicago, IL 60604
(312) 886-6879

Region 6
Regional Asbestos Coordinator
USEPA
First International Building
1201 Elm Street

(215) 597-9859

(214) 767-5314

Region 7
Regional Asbestos Coordinator
USEPA
726 Minnesota Avenue
Kansas City, KS 66101
(913) 236-2838

Region 9
Regional Asbestos Coordinator
USEPA
215 Fremont Street
San Francisco, CA 94105
(415) 974-8588

Region 8
Regional Asbestos Coordinator
USEPA
999 18th Street
Denver, CO 80202
(303) 293-1730

Region 10
Regional Asbestos Coordinator
USEPA
1200 Sixth Avenue
Seattle, WA 98101
(206) 442-2632

This list is from EPA's *Guidance for Controlling Asbestos-Containing Materials in Buildings,* 1985.

ORGANIZATIONS AND RESEARCH SOURCES

The following organizations provide information and guidance on the identification, management, maintenance, and removal of asbestos in buildings. Many of the organizations listed below have a technical staff available to answer questions relating to asbestos maintenance or removal. Because these organizations do not focus on historic preservation issues, it is important to have a clear understanding of the resource in order to minimize damage to the historic fabric when undertaking abatement work. The accompanying Update article provides guidance in making these important decisions.

National Asbestos Council, Inc. (NAC) D77 Northeast Expressway Suite 150 Atlanta, Georgia 30329 404-633-2622, FAX 404-633-5714

NAC is a multi-disciplinary nonprofit educational organization that provides information on asbestos. It publishes a quarterly journal and bimonthly newsletter on current asbestos information. Technical specialists are available that can answer questions on the problems of asbestos, its maintenance, and its removal. In addition, the NAC training department manages an Asbestos Abatement Worker Training Program supported by EPA.

TSCA Assistance Information US Environmental Protection (EPA) TS 799 401 M St., NW Washington, DC 20460 Hotline numbers: 202-554-1404, TDD 202-554-0551 (for hearing impaired)

TSCA (Toxic Substances Control Act) Assistance Information Service provides general guidance on asbestos in buildings. It provides information on how to identify asbestos in a building, as well as some technical information and specifications on removing asbestos from a building. Specific questions can be directed to the hotline number.

Asbestos Abatement Council of the Association of Wall and Ceiling Industries (AAC of AWCI) 1600 Cameron St. Alexandria, Virginia 22314 703-684-2924

AAC is a non-profit trade council that represents the asbestos abatement industry. It represents the contracting community which includes contractors, (some who have worked

on historic structures), manufacturers, distributors, and health professionals. It publishes a bimonthly magazine and monthly newsletter on asbestos issues. AAC can also provide information on what agency in each state is responsible for asbestos. EPA approved seminars are given by the AAC to train the worker and supervisor on the removal of asbestos. The AAC annual convention for 1990 on abatement is to be held January 22-25 in Miami.

National Insulation Contractors Association (NICA)
99 Canal Center Plaza, Suite 222, Alexandria, Virginia 22314,703-683-6422

NICA is a non-profit trade association that represents insulation and asbestos abatement contractors. It publishes several reference books on asbestos abatement, as well as the annual "Asbestos Abatement Industry Directory," (at a cost of $150) which includes information on State and Federal regulations; profiles on abatement contractors, consultants, laboratories and suppliers; and educational and insurance programs.

Building Owners and Managers Association (BOMA) 1201 New York Avenue, NW Suite 300 Washington, DC 20005 202-289-7000

BOMA represents asbestos abatement from the building owner's and manager's perspective. It features a rehab/remodeling department that deals with the asbestos abatement problem in historic buildings. BOMA periodically offers seminars on asbestos abatement.

Occupational Safety and Health Administration (OSHA) 200 Constitution Avenue, NW Rm. N37~8 Washington, DC 20210 For publication requests: 202-523-9667

OSHA is a government agency that issues and enforces rules and regulations for a safe and healthy work environment. It publishes guidance materials and standards on asbestos and asbestos removal which are available by calling the number listed above.

American Institute of Architects (AIA) 1735 New York Avenue, NW Washington, DC 20006 202-626-7448

The Building Performance and Regulations office at AIA deals with all types of fire, life safety, and minimum codes and standards regulations as well as Federal government regulations for buildings. They have excellent networking capabilities with other design professionals who have case study experience with architectural projects that involve asbestos abatement. Architects involved with asbestos abatement or removal in historic buildings are encouraged to contact the Building Performance and Regulations office at AIA.

National Institute of Building Sciences (NIBS) 1201 L St., NW Suite 400 Washington, DC 20005 202-289-7800

NIBS is a congressionally chartered, private, non-profit organization of the building community to improve the building regulatory process. NIBS has developed procedures and guide specifications to carry out an operations and maintenance program for asbestos in buildings. The publication developed, "Asbestos Abatement Management in Buildings, Model Guide Specifications" ($95 for members and $125 for nonmembers), provides design professionals with information they may need to specify asbestos abatement in a particular building.

FOR MORE READING

The following reading list includes government regulations and standards for the identification, maintenance, and removal of asbestos in buildings, as well as general guidance publications for identifying and controlling asbestos in buildings. It also identifies the national magazines that deal with asbestos issues. Many of the publications are available for a nominal cost from the organizations identified (see the list of Organizations and Research Sources for addresses and phone numbers). This reading list is not intended to be a comprehensive overview of the subject, and a more complete resource investigation should be undertaken when planning an asbestos abatement project.

Asbestos Abatement Industry Directory. Washington, DC: National Insulation Contractors Association (NICA), July 1989.

Asbestos Abatement & Management in Buildings, Model Guide Specifications. Washington, DC: National Institute of Building Sciences (NIBS), 1986, 1988 revised.

Asbestos in Schools and Public Buildings. Washington, DC: National Institute of Building Sciences (NIBS), 1984.

Asbestos in the Home. Washington, DC: U.S. Consumer Product Safety Commission, U.S. Environmental Protection Agency, August 1982. Available from U.S. Government Printing Office.

Asbestos Standard for Construction Industry. Washington, DC: Occupational Safety and Health Administration (OSHA), U.S. Department of Labor, 1986.

Asbestos Standard for General Industry. Washington, DC: Occupational Safety and Health Administration (OSHA), U.S. Department of Labor, 1987 (Revised).

Cesario, John F. "Controlling Asbestos in Buildings" **The Construction Specifier.** March 1989, pp. 124-130.

EPA Study of Asbestos-Containing Materials in Public Buildings, 1988 Report to Congress, Washington, DC: Environmental Protection Agency (EPA), 1988.

Genke, Mary S. "The Medical Threat." **Asbestos Issues '88.** March 1988. Note: **Asbestos Issues '88** is a monthly magazine published by Mediacom, Inc. in Fort Collins, Colorado.

Greenaway, Douglas A. **Most Commonly Asked Questions About Asbestos.** Washington, DC: Building Owners and Managers Associations (BOMA), 1987.

Guidance for Controlling Asbestos-Containing Materials in Buildings. Washington, DC: Environmental Protection Agency (EPA), 1985.

Kimball, David W. "Asbestos Assessment Study," **ECON, Environmental Contractor.** January 1988. Note: ECON, **Environmental Contractor** is a monthly magazine published by Duane Enterprises in Peekskille, New York.

McMillian, Robert R. "Fighting Asbestos— A Battle Plan for Property Owners." **Asbestos Issues '88.** March 1988.

McNally, Robert. "Fact Sheet: Asbestos Hazard Emergency Response Act (A.H.E.R.A.). **ECON, Environmental Contractor.** January 1988.

Melotte, Ralls C. "Asbestos and Historic Structures." **The Interiors Handbook for Historic Buildings.** Washington, DC: Historic Preservation Education Foundation. 1988.

Moore, Richard. "Summarizing A.H.E.R.A." **ECON, Environmental Contractor.** January 1988.

National Asbestos Council Journal. Atlanta, Georgia: National Asbestos Council, Inc. (NAC), published quarterly.

National Asbestos Council, Inc. "Asbestos Handbook." **National Real Estate Investor.** March 1989 (insert).

Computer News

Cultural Resources Information Management Strategy

(A Working Draft)

Betsy Chittenden

Introduction

The National Historic Preservation Act of 1%6 created a structure for managing cultural resources, including specific requirements for collecting information. In the 23 years since the Act was passed, the cultural resources community has collected enormous amounts of information on resources, honed its skills, and developed tools for resource management. However, the sheer volume of the information collected, and the fact that it is physically dispersed among dozens of offices and institutions, has made it difficult to get the most out of this in- formation. Often difficult to access or to compile, the information that has been painstakingly collected over the last two decades is not always available for making decisions about management or policies that affect the resources. However, technological changes— particularly the development of the computer as a powerful information management tool, and telecommunications for moving information from place to place—have created new opportunities for the cultural resources community to use information more fully.

It is understood that developing, testing, creating, and maintaining information management systems require funding and staffing beyond current levels. Serious budget proposals and planning, though, cannot occur at any level until a well-developed plan or strategy or agenda is devised. The current policy of the National Park Service is not to seek the adoption of additional program requirements for any purpose, for Federal, state or local agencies, without also providing the resources needed for their implementation.

Using technology requires coordination and it is in response to the need for greater coordination both within and beyond the National Park Service that this strategy is being developed. This outline summarizes the current situation and suggests a general approach for improving information management. It is a true first draft, intended to generate discussion among the entire cultural resources community, and intended to stimulate a process to build consensus and eventually action.

Goal

The primary goal of information management is to assist cultural resource managers in translating original data collected about vast numbers of properties into evaluated data, then into an understanding of the resources, then into management decisions, and finally, to drive some of the administrative processes to implement decisions.

Characteristics of the Cultural Resources Community

Any strategy for improving management within the cultural resources community, if it is to be successful, must work within the existing framework of the community and the information relationships that exist there. The following points are key characteristics of the cultural resources community that will shape its information management strategy.

• The cultural resources community is made up of a number of organizations at the Federal, state, and local levels, that have varying degrees of involvement in the management of cultural resources. The major organizations involved in cultural resources management actually own very few of these resources. Thus, the cultural resources

community is primarily involved in indirect management of cultural resources, through programs, law enforcement, guidance, and incentives.

• With the management and ownership of the resources dispersed, information about the resources is also dispersed. Cultural resources information is collected, maintained and used throughout the cultural resources community.

• The variety of professional disciplines and their vocabularies within the cultural resources community affects both cultural resources information and the community's organizational structure.

• The various members of the cultural resources community— have different individual requirements, organizational systems, and managerial styles;

• have different existing technical equipment available, ranging from nothing to microcomputers to mainframes, and an equal variety of software; - have widely varying staff capabilities to use and support automation.

• The SHPO should be the primary statewide collection point for information about cultural resources and activities affecting cultural resources, due to their survey and inventory responsibilities defined by the NHPA. A large portion of the information that moves within the cultural resources community goes from the SHPOs to the NPS. The SHPOs also serve as an information clearinghouse for other Federal agencies and the general public.

• Federal agencies own and manage about one third of the land area of the United States. For the interests of cultural resources to be taken into account in the management decisions about these lands requires the collection *and transfer* of large amounts of information.

• The National Park Service is largely responsible for ensuring that the provisions of the National Historic Preservation Act are carried out. It also owns and manages hundreds of historic and prehistoric resources nationwide. The National Park Service has a complex internal organizational structure that defines a number of information collecting and using subdivisions. An important function of the NPS is to produce regional and national level information for policy-making.

• The information about cultural resources, collected through the survey and inventory process, is locational and descriptive in nature. While valuable in its raw state, it also needs to be compiled, massaged, analyzed and evaluated for a number of important uses.

Information Management Challenges

• There are no data standards, either recommended or required, governing what information should be collected by the SHPOs or others about individual properties.

• Without standard mechanisms that facilitate broad professional interaction, such as professional journals discussing cultural resources administration, news about progress in information management travels slowly among the 1. community at large. This in turn contributes to duplication of effort, as numerous organizations solve common information management problems in isolation.

• A basic information issue that remains unresolved is how to count historic resources, an issue that is closely involved with the definition of building, structure, site, object, etc. Various guidance and regulations differ in their definitions of resource types; without

consistent definitions, consistent information collection and accurate counts of resources are impossible.

The combination of decentralized funding, fragmented budgets, and an overall lack of adequate funds means that it is difficult to find or create large sums of money for large projects. Successful projects must generally be either small in scope, or phased over time, to fit into this funding scenario.

• The lack of mechanisms for sharing the costs of databases is a serious obstacle to sharing information since no one organization can bear the costs of a large number of people using a database.

• The dispersed nature of the cultural resources community, and the lack of a standard telecommunications environment to tie the community together, currently puts pragmatic limits on the electronic transfer of information. This situation may improve over the next two years, however, with the advent of nationwide communications standards.

• It is difficult or impossible, depending on the specific issue, to combine information from different sources in the cultural resources community. Most of the existing information resources throughout the country have been developed for the purposes specific to their organization, with limited attention paid to tying the information on cultural resources to a broader context of administrative program objectives, or to planning for the wide use of dispersed cultural resource information.

The distribution and use of information across program, bureau, and agency boundaries at the Federal, state, and local levels is limited. Most frequently it consists of consolidated information in the form of printed reports and summaries, rather than information in machine-readable form that can be subject to further analysis.

Working Assumptions

1. The objective of any strategy for cultural resources information management is to increase the ability of the cultural resources community to use information on cultural resources.

2. The overall organization and structure of the cultural resources community will not change significantly. All existing organizational levels are important and have an important role to play in information management.

3. Given the organizational structure of the cultural resources community information collection and maintenance will continue to be geographically and organizationally dispersed.

4. All cultural resource organizations have a certain amount of information needs in common, but also have individual information needs and interests that vary from place to place and among different organizational levels. This suggests that standardizing all possible cultural resources information is unnecessary, and that the emphasis should be placed on the coordination of selected information that meets needs common to all levels of the cultural resources community.

5. The place where cultural resource information is developed and maintained may or may not be the only place where that information is needed, or where decisions affecting resources are made.

6. All members of the cultural resources community that develop and maintain information have a responsibility to consider the value of that information to others outside

of their immediate organization, recognizing that information must serve a wide, not a narrow, range of users and needs.

7. Since the objective is to increase the ability to transfer and aggregate **information,** the emphasis of the information strategy should be on information standardization where necessary, and not on standardizing software or hardware except as it may encourage the adoption or use of standardized information.

8. Separate disciplinary perspectives are not sufficient for comprehensive cultural resource management and effective decision-making. Any information management strategy should take an approach that develops or promotes the ability to use information from several disciplines.

9. The cultural resources community needs the ability to develop information that crosses political boundaries and is regional and national in scope. Political boundaries are artificial—resources denote human development which does not respect political boundaries.

10. Information coordination efforts should respect regional, organizational, and professional differences in the type of information that is collected and in information management styles.

11. Any effort to integrate information in the cultural resources community should be modular, so that progress is made toward better and more complete integration in discrete and completable steps. Situations in which very large and long projects are needed in order to reach an objective should be evaluated for excessive risk of failure or waste.

12. Given the tight budgets of nearly all members of the cultural resources community, no information management projects should be done that will result in new or additional requirements or expense without securing additional resources sufficient for the task. (Current NPS policy is that nothing should be done that will result in additional or expanded program requirements for SHPOs or Federal agencies without additional funds.)

The Nucleus of a Proposed Information Management Strategy

Objectives: The objective of the information management strategy is to improve the ability of the cultural resources community to use information by improving the ability of the community to combine, compile, aggregate, access and transfer cultural resources information. The working assumptions, taken together, dictate an overall information management strategy to develop a cultural resources information management system. Both the system and the methods employed should work with the needs, character, resources, and organization of the cultural resources community.

The Information System The basic characteristics of the information management **system** are:

1. The information remains **dispersed**— i.e., no "megasystems" that contain information on all cultural resources are created.

2. The information is **selectively compatible**—i.e., selected important pieces of information are standardized throughout the cultural resources community, with the rest up to individual organizations. Generally the wider the geographic scope of the organization, the less detailed information should be required.

3. The community meets information needs largely through the **transfer** of selected information, not upon direct access to individual systems.

4. The community develops and maintains **mechanisms** for ensuring that the system remains viable. These include mechanisms for data standardization, communications protocols, coordination of projects and improvements, roles and responsibilities, and cost sharing.

The Approach:
The basic approach to developing the information management system is:

1. **The cultural resources community first needs to agree upon its goals, assumptions, and strategy.** With the overall direction agreed upon, specific projects and tasks that are needed to fulfill the overall goal should be identified and then undertaken by various members of the cultural resources community. Periodically, the community should evaluate its progress and reassess it goals and objectives to ensure that they are still relevant and appropriate.

2. A **variety of separate projects should be undertaken by various members of the cultural resources community, each project being a piece that contributes toward an overall, agreed-upon goal, using centralized planning and direction but not execution.** While one organization or a coalition of organizations can maintain the master strategy and suggest or coordinate projects, actual work should be dispersed among the community in discrete projects. This fits the dispersed nature of the community and its information, as well as the uncertain and dispersed funding structure.

3. **Development of the system should be phased, building on the structure already in place, and providing an evolutionary path for making the transition from the existing situation to a new system.** This approach works well in difficult funding situations, working with small pieces that are less vulnerable to funding problems and involve less risk in case of failure. Development should recognize the need to accommodate existing investments in databases, software, and hardware at NPS, State Historic Preservation Offices, and elsewhere. Also, this method provides built-in flexibility and numerous check-points at which new technology and changes in the needs or structure of the cultural resources community can be evaluated, and mid-stream course corrections made.

4. Participation in various aspects of the system should be voluntary to the greatest extent possible, with any involuntary aspects worked carefully into the existing structure of regulations and guidance, and only when absolutely necessary. Success of the system should depend upon how successfully it meets the needs of *all* potential users, and should be a consequence of consensus and good design.

5. **Development of the system should emphasize information, coordination, and communication, not hardware and software per se.** The system should rely as much as possible upon standardizing data and communications protocols. Software development should focus on linking different hardware and existing systems, and on prototypes that encourage the adoption and use of standardized information.

A Short Range Agenda for Action

The objective of the agenda presented below is to build consensus and eventual agreement on goals, assumptions, and overall strategy, at the same time developing mechanisms to coordinate implementation of the strategy.

1. The NPS information management coordinator is drafting a discussion paper on cultural resources information management strategy document. This is being based on information generally available and on the sense of current discussions in the cultural resources community.

2. The NPS will organize at least the first of many symposia, as needed, for concentrated discussion and resolution of issues raised by or apart from the draft. This first symposium is tentatively scheduled for June 1989, with the goal of having a final draft agreed upon by the cultural resources community by early 1990.

The ultimate products of these meetings should be:

A. Consensus on an information management strategy.

B. Identify a mechanism for continued communication among the cultural resources community on information management issues, including Federal agencies, SHPOs, the National Trust, the Advisory Council, local governments, and others.

C. An agenda of policy, procedure, budget, and project activities for the next three to five years.

Applications Exchange
START: A Computerized Artifact Analysis and Reporting Program Interfaces with the Automated National Catalog System

Guy Prentice

A menu-driven archeological artifact analysis computer program called START has recently been developed by the author as part of the Mammoth Cave National Park Archeological Inventory Project. The START program gives archeologists who lack experience in programming the ability to analyze artifact and provenience data using a large number of artifact and provenience attributes.

The START program also contains a subprogram for converting the artifact and provenience data into the Automated National Catalog System (ANCS) format for NPS curation of archeological collections. There are numerous fields in START that are common to ANCS and allow conversions to be made. START'S capability to do rapid and direct automatic dumping of data into matching ANCS fields eliminates duplication of work, thus saving NPS archeologists and curators considerable time and money in cataloguing archeological collections.

The START program is a modular system of dBASE III Plus programs that makes the most of the relational database limitations (10 open database files) inherent in the dBASE III Plus environment. The modular approach of the START program simplifies data entry, enables automatic data error checking, and simplifies coding of new artifact and attribute types.

Hardware and Software Requirements

Running the START program requires the following: An IBM PC, AT or IBM compatible computer with 512K RAM (or greater), a hard disk drive (preferably 20 MB or larger), DDS 3.0 or higher, a monitor and video card capable of 80x25 display, a wide carriage dot matrix printer, a copy of dBASE III Plus, and a copy of the ANCS program

Data Format Requirements

Certain data formats are required to use the START program, but these are fairly general and should be thought of as minimal constraints. The first assumption is that artifacts are analyzed according to Field Specimen (FS) numbers. A FS number can be simply thought of as a bag number. Within a single FS, there can be a single artifact (e.g., a surface collected piece plot) or thousands of artifacts (e.g., all the artifacts collected from an excavation unit level).

A second assumption made in the program is that each FS number is unique and assigned to only one provenience (e.g. FS #1 is a general material bag from Unit 2, Level 2; no other provenience in the database has an FS #1). Each provenience unit can, however, possess several FS numbers (e.g. FS #2 is a piece plot and FS #3 is a general material bag that both came from Unit 2, Level 4).

The third assumption made in the program is that each artifact within an FS has a unique artifact number (e.g. FS #1 contains 26 artifacts: 1 knife blade, 13 sherds, 11 animal bones, and 1 shell and these have been assigned artifact numbers 126). The assumption that each artifact has a unique number and, therefore, a unique computer entry

in the START program, allows the analyst to enter detailed information for each artifact (and sort on it later), if desired. The unique artifact entry mode used in this program does not mean that a separate entry needs to be made for each artifact if the analyst does not feel that such detailed information is necessary. The analyst can adopt the convention, if desired, of assigning a number of like artifacts within an FS to the same artifact number, analogous to the National Catalog concept of lot cataloging archeological artifacts. If we were to use this approach in our previous example, the knife blade could be assigned artifact #1, the 13 sherds could be artifact #2, the 11 bones could be artifact #3, and the shell could be artifact #4. The appropriate number of artifacts assigned to each artifact number would then be entered in the count field to reflect the numbers of artifacts within each "artifact number" in the computer entry within the START program. This data could then be "dumped" directly into ANCS fields, such as item count.

Artifact Data Types

For artifact data, there are two levels of data entry: general and detailed. The general level of data entry is required and consists of identifying the artifact type, material type, two Munsell colors, a third Munsell color to describe chert cortex, length, width, thickness, weight, and number of artifacts (see Table 1). The only information required at the general level of analysis, however, is: FS number, artifact number, artifact type, material type, and count.

The detailed analyses are voluntary and oriented toward lithic and ceramic analysis. The detailed artifact analyses include a large number of artifact attributes (see Tables 2 and 3). A chronology database is also present for use in conjunction with the detailed analysis data sets in order to group related artifact types, to compute mean ceramic dates, to calculate TPQ dates, etc.

Provenience Data Types

Provenience data is required for all FS numbers entered into the program. Three types of provenience data are accommodated in the program: surface collection information, shovel test information, and excavation unit information. Each provenience type is entered and edited in its own data entry module. Some of the specific data types are shared between provenience modules (e.g., UTM coordinates), but others are unique to the provenience types (Tables 4-6).

Chronology Data Types

The chronological database allows the user to enter BC and AD date ranges for specific artifact types so that date calculations can be made for artifact data sets and subsets. The data set also allows numerous artifact types to be grouped under user defined artifact classes for analysis purposes. The artifact types included in the chronology database can be assigned and changed as the user desires but must conform to the following limitation for the program to work properly; ceramic types must have a code value from 1 to 6999, and lithic types must have a code value from 7000 to 9000. Code values of 9001 to 9999 are reserved for "other" artifact types (neither ceramic nor lithic) that are chronological indicators.

General Artifact Codes

The START system of artifactual analysis requires that artifacts be categorized according to two general criteria: (1) the type of artifact (sherd, spoon, projectile point, etc.), and (2) the material composition of the artifact (glass, metal, chert, etc.). To reduce disk storage and data entry error, numeric codes are used to store these types of information.

General Artifact Type Codes

General artifact codes can be assigned and changed as the user desires and can follow two different formats. The first format assigns artifacts to the groupings shown in Table 7. This format assigns "functional" labels to artifacts (drill, graver, scraper, bowl, jar, etc.), but it is intended to be a formal (by shape—physical and/or observable characteristics) rather than a functional (by use) approach to classifying artifact types.

The second format follows the "Southian" convention (e.g. South 1977)1 of assigning artifacts to artifact groups according to their functions. The codes and categories of artifacts shown in Table 8 have been used m this software package, but the user is free to redefine artifact groups, artifact types, and codes as needed.

Material Codes

Material codes are assigned to artifacts so that they can be sorted according to their material composition (all obsidian, all metals, all glass, etc.) regardless of their form or function. Material codes can be assigned and changed as the user desires but must conform to the limitations shown in Table 9 for the ANCS conversion program to work properly. If the user is not going to use the ANCS conversion portion of the program or is going to rewrite it or adapt the START program, the material codes may be altered to suit the user's own purposes.

Future Developments

The START program is being distributed to interested users in an uncompiled format. (Copies of the START program and a users' manual can be obtained by contacting the Southeast Archeological Center, P.0. Box 2416, Tallahassee, FL 32316.) This means that individuals familiar with dBASE programming can modify and expand the capabilities of the program to meet their own needs with a minimum of effort. The developers of the START program will continue to modify and increase the capacities of the artifact analysis package. A section of the package devoted to faunal analysis is presently being planned.

1South, Stanley. 1977. *Method and Theory in Historical Archaeology.* Academic Press, NY.

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NPS Issues Shipwreck Guidelines

On April 4, 1989, the National Park Service issued the advisory guidelines required under the Abandoned Shipwreck Act of 1987 (Public Law 100-298). The guidelines are to assist state and Federal agencies in developing legislation and regulations to carry out their responsibilities under the Act. Under the Act, the United States asserts title to certain abandoned shipwrecks and then transfers title to the state in or on whose submerged lands the shipwreck is located. The Act enables the states to manage those abandoned shipwrecks pursuant to historic preservation laws rather than admiralty laws. In developing the guidelines, the Service gave full consideration to ideas, comments and suggestions provided by over 295 public and private sector interests, including sport divers, diveboat operators, commercial salvors, archeologists, historic preservationists, and government agencies (Federal, state and local). The Service has issued proposed guidelines for public review and comment. An unusually long comment period of 180 days should enable the various interest groups sufficient time to obtain, review, meet and discuss the proposed guidelines.

As required by the Act, the guidelines were published in the Federal Register (54 FR 13642). Persons who wish to receive a copy of the proposed guidelines should send their name and mailing address to the Departmental Consulting Archeologist, National Park Service, Department of the Interior, P.O. Box 37127, Washington, DC 20013-7127. The deadline for submitting comments to the Departmental Consulting Archeologist is October 2, 1989.

Dogwatch

Maritime Heritage of the United States

National Historic Landmark Study—Large Vessels

James P. Delgado

"Dogwatch" is the term traditionally used for the two-hour watch during which half the ship's crew eats supper and swaps stories.

Since 1935 the National Park Service, acting for the Secretary of the Interior, has studied and recommended properties for designation as National Historic Landmarks. The Service's History Division conducts the National Historic Landmark (NHL) Program, which identifies, designates, recognizes, and protects buildings, structures, sites and objects of national significance. There are 1,855 NHLs formally designated by the Secretary of the Interior.

America was born of the sea, and throughout much of our history one of the most pervasive threads in the fabric of American culture was maritime lore and achievement. Unfortunately, until recent years the maritime heritage of the United States was not fully recognized by NHL designations. As late as 1980 there were less than 10 NHL vessels. A Congressionally-requested study of warships associated with World War II in the Pacific was completed by Dr. Harry Butowsky in 1985, resulting in the designation of 22 vessels—battleships, aircraft carriers, destroyers, minesweepers and a PT Boat. The same year the National Park Service began the National Maritime Initiative (discussed in previous issues of the *CRM Bulletin).* As part of the Initiative, the NPS, working with the National Trust for Historic Preservation and the maritime preservation community at large, surveyed the Nation's surviving historic vessels. Out of some 245 large preserved historic vessels, a national committee of maritime historians and preservation experts recommended more than 90 large vessels be studied as potential NHLs.

Since 1987, the National Maritime Initiative has studied 43 historic vessels in the United States; of these, 13 have been designated National Historic Landmarks by the Secretary and 19 are pending designation. Of the first group of vessels studied by the Initiative, ten NHLs were designated by Secretary Manuel Lujan, Jr., on April 11, 1989. They are:

Adventuress (1913), Seattle, Washington. Built for Arctic hunting, *Adventuress* was purchased by the San Francisco Bar Pilots Association in 1914. She is the oldest surviving pilotboat from the significant port of San Francisco.

USS Albacore (1949), Portsmouth, New Hampshire. The first true submarine built in the United States, *Albacore's* hull design subordinated surface characteristics to underwater performance. The experimental sub paved the way for modern submarines.

Arthur Foss (1889), Kirkland, Washington. Best surviving example of a late 19th-century wooden tugboat, *Arthur Foss* had a long and distinguished career on the Pacific Coast that included a starring role in "Tugboat Annie," a 1933 film that epitomized tugboats for many Americans.

Captain Meriwether Lewis (1931), Brownsville, Nebraska. One of a handful of surviving historic Army Corps of Engineers dredges, *Lewis* used steam engine-driven suction pumps to improve navigation on the upper reaches of the Missouri River, opening a nationally important riverine trade route in the Nation's heartland.

SS Clipper (1904), Chicago, Illinois. *Clipper* is the oldest United States passenger steamship on the Great Lakes. Her superstructure, rebuilt in 1940, is an excellent example of the "streamlined moderne" style.

Falls of Clyde (~78), Honolulu, Hawaii. One of the oldest square-riggers in the United States, *Falls of Clyde is* the only 4-masted full-rigged ship left in the world. Converted to a sailing oil tanker in 1907 for trade between California and Hawaii, she is the only sailing oil tanker in existence.

Lettie G. Howard (1893), New York, New York. The wooden fishing vessel *Lettie G. Howard is* the last remaining example of a *Fredonia* model schooner, once the standard fishing boat type in North American offshore fisheries.

Lightship *No*. 83, "Relief" (1904), Kirkland, Washington. One of the Nation's oldest lightships, *No*. 83 served on several important Pacific Coast stations. She is the only lightship to retain her original steam engine.

Lightship *No*. 87, "Ambrose" (1907), New York, New York. One of the oldest lightships in the United States, *No*. 87 marked the approach to the nationally significant port of New York for decades.

Luna (1929), Boston, Massachusetts. One of a few surviving wooden hulled tugboats in the United States, *Luna* was the first tugboat built with diesel-electric propulsion, now the standard for most vessels. The successful career and operation of *Luna* greatly influenced worldwide tugboat propulsion design.

Decisions on five vessels have been deferred, and six vessels studied were not recommended for designation. There are now 50 NHL ships; by year's end there should be 70. There are an additional 68 vessels to be studied, including tugboats, lightships, ferries, Great Lakes bulk and freight carriers, schooners, Army Corps of Engineers dredges, riverboats, yachts, and pilotboats. The study and NHL designation of these vessels will not only aid efforts to preserve and protect these vessels but will also offer a comprehensive overview, assessment, and evaluation of the most significant of the Nation's collection of historic ships.